

# DECLARATION Utility Application

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **SYSTEMS AND DEVICES FOR PHOTOELECTROPHORETIC TRANSPORT AND HYBRIDIZATION OF OLIGONUCLEOTIDES** the specification of which

(Check One) ☐ is attached hereto OR  
☒ was filed on January 24, 2000 as United States Application Serial No. 09/489,855 or PCT International Application No. \_\_\_\_\_ and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment(s) referred to above.

I acknowledge the duty to disclose information which is material to the patentability of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Date of Filing	Priority Claimed	
			Yes	N

I hereby claim the benefit under Title 35, United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date

I hereby claim the benefit under Title 35, United States Code, § 120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	Parent Filing Date	Status-Patented, Pending or Abandoned
CIP of 09/436,311, which is a CIP of 08/760,933	November 9, 1999 December 6, 1996	Pending Pending

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

201	FULL NAME OF INVENTOR	FIRST Name Carl	MIDDLE Initial Frederick	LAST Name Edman	
	RESIDENCE & CITIZENSHIP	City San Diego	State or Foreign Country California	Country of Citizenship USA	
	POST OFFICE ADDRESS	12545-C El Camino Real	City San Diego	State or Country CA	Zip Code 92130
INVENTOR'S SIGNATURE			<u>Carl F. Edman</u>		DATE <u>Aug. 10, '00</u>

202	FULL NAME OF INVENTOR	FIRST Name Michael	MIDDLE Initial James	LAST Name Heller	
	RESIDENCE & CITIZENSHIP	City Encinitas	State or Foreign Country CA	Country of Citizenship USA	
	POST OFFICE ADDRESS	1614 Hawk View Drive	City Encinitas	State or Country CA	Zip Code 92024
INVENTOR'S SIGNATURE			<u>Michael J. Heller</u>		DATE <u>8/10/00</u>

203	FULL NAME OF INVENTOR	FIRST Name Christian	MIDDLE Initial	LAST Name Gurtner	
	RESIDENCE & CITIZENSHIP	City La Jolla	State or Foreign Country CA	Country of Citizenship USA	
	POST OFFICE ADDRESS	8011 Paseo del Ocaso	City La Jolla	State or Country CA	Zip Code 92037
INVENTOR'S SIGNATURE			<u>C. Gurtner</u>		DATE <u>8/11/00</u>

204	FULL NAME OF INVENTOR	FIRST Name Rachel	MIDDLE Initial	LAST Name Formosa	
	RESIDENCE & CITIZENSHIP	City San Diego	State or Foreign Country CA	Country of Citizenship USA	
	POST OFFICE ADDRESS	764 Tourmaline Street	City San Diego	State or Country CA	Zip Code 92109
INVENTOR'S SIGNATURE			<u>Rachel Formosa</u>		DATE <u>08/14/00</u>

205	FULL NAME OF INVENTOR	FIRST Name	MIDDLE Initial	LAST Name	
	RESIDENCE & CITIZENSHIP	City	State or Foreign Country	Country of Citizenship	
	POST OFFICE ADDRESS		City	State or Country	Zip Code
INVENTOR'S SIGNATURE			DATE		



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

OCTOBER 25, 2000

PTAS



\*101454096A\*

LYON & LYON LLP  
DAVID B. MURPHY  
633 WEST FIFTH STREET, SUITE 4700  
LOS ANGELES, CA 90071-2066

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UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT U.S. PROSECUTION

THE ENCLOSED DOCUMENT HAS BEEN RECORDED BY THE ASSIGNMENT DIVISION OF THE U.S. PATENT AND TRADEMARK OFFICE. A COMPLETE MICROFILM COPY IS AVAILABLE AT THE ASSIGNMENT SEARCH ROOM ON THE REEL AND FRAME NUMBER REFERENCED BELOW.

PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 08/28/2000

REEL/FRAME: 011048/0697  
NUMBER OF PAGES: 7

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

EDMAN, CARL F.

DOC DATE: 08/14/2000

ASSIGNOR:

HELLER, MICHAEL J.

DOC DATE: 08/14/2000

ASSIGNOR:

BURTNER, CHRISTIAN

DOC DATE: 08/14/2000

ASSIGNOR:

FORMOSA, RACHEL

DOC DATE: 08/14/2000

ASSIGNEE:

NANOGEN, INC.  
10398 PACIFIC CENTER COURT  
SAN DIEGO, CALIFORNIA 92121

SERIAL NUMBER: 09489855

FILING DATE: 01/24/2000

PATENT NUMBER:

ISSUE DATE:

011048/0697 PAGE 2

SHAREILL COLES, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

09-12-2000

FORM PTO-1595  
1-31-92U.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

Docket No. 249/282

101454096

To the Honorable Commissioner of Patents and Trademarks. Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
Carl F. Edman, Michael J. Heller, Christian Burtner, and Rachel Formosa

Additional name(s) of conveying party(ies) attached?

☐ Yes ☒ No

3. Nature of conveyance:

☒ Assignment  
☐ Security Agreement☐ Merger☐ Change of Name☐ Other \_\_\_\_\_

Execution Date: August 14, 2000

2. Name and address of receiving party:

Name: Nanogen, Inc.

Internal Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Street Address: 10398 Pacific Center Court

City: San Diego State: CA Zip: 92121

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: August 14, 2000

A. Patent Application No(s): 09/489,855

B. Patent No(s):

Additional numbers attached? ☐ Yes ☒ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: David B. Murphy

Internal Address: LYON & LYON LLP  
633 West Fifth Street, Suite 4700  
Los Angeles, CA 90071-2066

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41): \$ 40.00

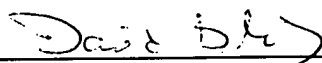
☒ Enclosed☐ Charge this Deposit Account if any additional fee is required

8. Deposit Account Number: 12-2475

## DO NOT USE THIS SPACE

9. Statement and signature:

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

  
David B. Murphy, Reg No. 31,125

Date: August 21, 2000

Total number of pages including cover sheet:

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OC-60708.1

## CERTIFICATE OF MAILING

(37 C.F.R. §1.8a)

I hereby certify that this paper (along with any referred to as being attached or enclosed) is being deposited with the United States Postal Service on the date shown below with sufficient postage as First Class Mail in an envelope addressed to the Commissioner for Patents, Washington, D.C. 20231.

August 21, 2000  
Date of Deposit

Denise Doss

Name of Person Mailing Paper

Signature of Person Mailing Paper

ASSIGNMENT

WHEREAS, WE, CARL F. EDMAN, a citizen of the United States, residing at 12545-C El Camino Real, San Diego, California 92130, MICHAEL J. HELLER, a citizen of the United States, residing at 1614 Hawk View Drive, Encinitas, California 92024, CHRISTIAN GURTNER, a citizen of the United States, residing at 8011 Paseo del Ocaso, La Jolla, California 92037, and RACHEL FORMOSA, a citizen of the United States, residing at 764 Tourmaline Street, San Diego, California 92109 (hereinafter referred to as "ASSIGNORS"), have invented and own a certain invention entitled *SYSTEMS AND DEVICES FOR PHOTOELECTROPHORETIC TRANSPORT AND HYBRIDIZATION OF OLIGONUCLEOTIDES* for which application for Letters Patent of the United States of America has been filed on January 24, 2000, assigned Serial No. 09/489,855; and

WHEREAS, NANOGEN, INC., a corporation organized and existing under and by virtue of the laws of the State of Delaware and having its principal place of business at 10398 Pacific Center Court, San Diego, California 92121 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the exclusive right, title and interest in, to and under said invention and in, to and under any Patent or similar legal protection to be obtained therefor in the United States of America, its territorial possessions and in any and all countries foreign thereto.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, ASSIGNORS hereby sell, assign, transfer and set over unto the said ASSIGNEE, its successors and assigns, the full and exclusive right, title and interest to said invention and to all Letters Patent or application or similar legal protection, not only in the United States and its territorial possessions, but in all countries foreign thereto to be obtained for said invention by said application, and to any continuation, division, renewal, substitute or reissue thereof or any legal

equivalent thereof in the United States or a foreign country for the full term or terms for which the same may be granted, including all priority rights under the International Convention; and ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue said Letters Patent or any legal equivalent thereof to said ASSIGNEE, its successors and assigns, in accordance with this Assignment.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Agreement;

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representative any and all papers, instruments or affidavits required to apply for, obtain, maintain, issue and enforce said application, said invention and said Letters Patent and said equivalents in the United States or in any foreign country, which may be necessary or desirable to carry out the purposes thereof.

WITNESS my hand at San Diego, California, this

10<sup>th</sup> day of August, 2000.

Carl F. Edman  
CARL F. EDMAN

STATE OF CALIFORNIA )  
 ) ss  
COUNTY OF SAN DIEGO )

On 8/10/00 before me, DEANN L. ZELLMANN, personally appeared  
CARL F. EDMAN

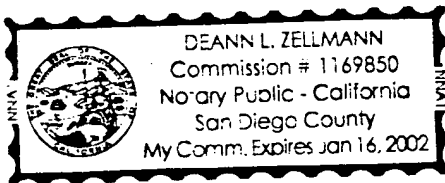
☐ personally known to me

- OR -

☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

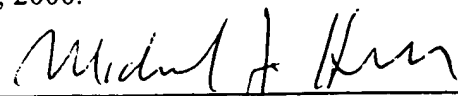
WITNESS my hand and official seal.

Deann L. Zellmann  
Notary Public in and for  
said County and State





WITNESS my hand at San Diego, California, this  
10 day of August, 2000.

  
MICHAEL J. HELLER

STATE OF CALIFORNIA           )  
  ) ss  
COUNTY OF SAN DIEGO    )

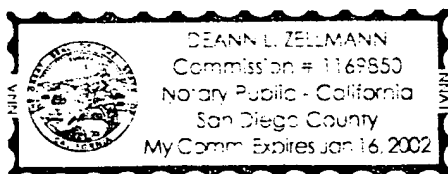
On 8/10/00 before me, DEANN L. ZELLMANN, personally appeared  
MICHAEL J. HELLER

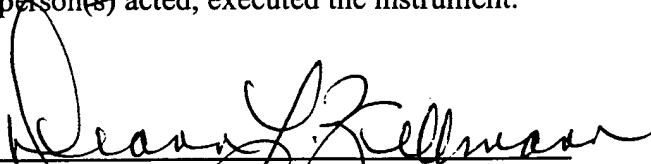
☐ personally known to me

- OR -

☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)  
is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the  
same in his/~~her/their~~ authorized capacity(ies), and that by his/~~her/their~~ signature(s) on the instrument  
the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



  
Notary Public in and for  
said County and State

WITNESS my hand at San Diego, California, this  
11th day of August, 2000.

C. G.  
CHRISTIAN GÜRTNER

STATE OF CALIFORNIA       )  
  ) ss  
COUNTY OF SAN DIEGO )

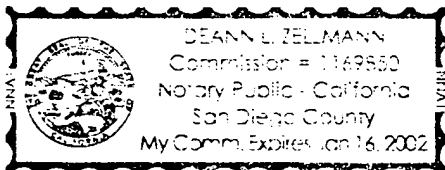
On 8/11/00 before me, DEANN L. ZELLMANN, personally appeared  
CHRISTIAN GÜRTNER

☐ personally known to me

- OR -

☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)  
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the  
same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument  
the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann  
Notary Public in and for  
said County and State

WITNESS my hand at San Diego, California, this

14<sup>th</sup> day of August, 2000.

Rachel Formosa  
RACHEL FORMOSA

STATE OF CALIFORNIA           )  
  ) ss  
COUNTY OF SAN DIEGO )

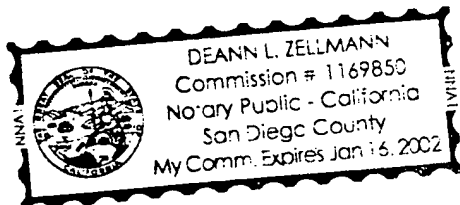
On 8/14/00 before me, DEANN L. ZELLMANN, personally appeared  
RACHEL FORMOSA

☐ personally known to me

- OR -

☒ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s)  
is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the  
same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument  
the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.



Deann L. Zellmann  
Notary Public in and for  
said County and State

**POWER OF ATTORNEY  
By Assignee**

Nanogen, Inc., assignee(s) of the application for United States Letters Patent for an improvement in

SYSTEMS AND DEVICES FOR PHOTOELECTROPHORETIC  
TRANSPORT AND HYBRIDIZATION OF OLIGONUCLEOTIDES  
by Carl F. Edman et al.,

the specification of which:

☒ is filed herewith, OR  
☐ was filed on \_\_\_\_\_, having U.S. Patent Application Serial No. \_\_\_\_\_,

does hereby appoint as my attorneys and/or agents, with full power of substitution and revocation, to prosecute this application and transact all business in the United States Patent and Trademark Office, and in countries other than the United States, and to do all things necessary or appropriate therefor before any competent International Authorities in connection with any international patent application(s) corresponding to the above-identified application, all of the registered practitioners identified by Customer Number 34263:

**34263**

PATENT TRADEMARK OFFICE

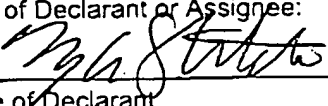
O'MELVENY & MYERS LLP  
114 Pacifica, Suite 100  
Irvine, CA 92618  
(949) 737-2900

Please send all correspondence to the attention of David B. Murphy, at the above Customer Number, and direct all telephone calls to (949) 737-2900.

I, the undersigned, declare that I have reviewed copies of the documentary evidence establishing chain of title to the patent application identified above from the inventor(s) to the assignee(s), which:

☐ is filed for recordation herewith; or  
☒ was recorded at Reel 011048, Frame 0697 (in parent application SN: 09/489,855); or  
☐ has been sent for recordation under separate cover, copy attached herewith.

To the best of the undersigned's knowledge and belief, title is in the assignee(s) identified above. Furthermore, the undersigned is empowered to sign this document on behalf of the assignee(s).

Full Name of Assignee: Nanogen, Inc.	
Post Office Address: 10398 Pacific Center Court, San Diego, CA 92121	
Signature of Declarant or Assignee: 	Date: 2/3/04
Full Name of Declarant If Other Than Assignee: Mary Ann Stretch	
Title of Declarant: Executive Director, Intellectual Property and Licensing	
Address of Declarant: 10398 Pacific Center Court, San Diego, CA 92121	